

AMENDED CLAIMS

received by the International Bureau on 02 August 2005 (02.08.2005): original claims 1-20 have been replaced by amended claims 1-23.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A jacketed projectile having front and rear ends separated by the length of the projectile and comprising:
 - a) an engravable jacket, and
 - b) a central core, the central core having a midsection portion which is not in continuous contact with the jacket over at least a portion of the midsection portion to allow engraving to occur on the jacket without full support from the core, wherein the midsection portion is tapered, tapering towards the front end of the projectile to allow for progressive engraving of the jacket when the projectile is fired through a rifled barrel.
2. A jacketed projectile as in claim 1 comprising a fully encircling gap between the jacket and the core along at least a portion of the length of the midsection portion of the core.
3. A projectile as in claim 2 wherein the encircling gap is in the form of a tapered gap present between the jacket and the midsection portion along at least a portion of the length of the midsection portion.
4. A projectile as in claim 2 wherein the encircling gap is in the form of a fully encircling tapered gap present between the jacket and the full length of the midsection portion.
5. A projectile as in any one of the preceding claims wherein the midsection portion is frusto-conical in shape.

6. A projectile according to claim 5 wherein the half-conical angle of the frusto-conical portion of the core is between 0.7° and 1.0°.
7. A projectile according to claim 5 wherein the half-conical angle of the frusto-conical portion of the core is between 0.85° and 0.95°.
8. A projectile according to any one of the preceding claims comprising a short cylindrical portion of the core having an outer surface, the cylindrical portion extending rearwardly from the midsection of the core, wherein the jacket and outer surface of the cylindrical portion are in generally continuous contact with each other for the length of the cylindrical portion.
9. A projectile according to claim 8 wherein the cylindrical portion of the core is less than 30% of the length of the midsection portion.
10. A projectile as in any one of claims 2, 3 or 4 wherein the gap is occupied by a compressible medium.
11. A projectile as in claim 10 wherein the compressible medium is air.
12. A projectile as in any one of the preceding claims wherein the central core is principally composed of a material selected from the group consisting of carbon steel, tungsten, tungsten carbide, tungsten alloys, tungsten-nylon compounds, tungsten-tin compounds and mixtures thereof.
13. A projectile as in claim 12 wherein the central core has a hardness and the hardness of the central core is at least 45 on the Rockwell C hardness scale.
14. A projectile as in claim 1 wherein the core comprises a forward portion mounted ahead of the midsection, said forward portion having an ogival shape over at least a

portion of its surface and wherein the junction between the forward and the midsection portions provides a relatively smooth transition zone.

15. A projectile as in claim 14 comprising an inwardly tapering end portion of the core positioned rearwardly of the cylindrical portion.

16. A projectile as in claim 15 wherein the rearwardly tapering end portion of the core has a half-conical angle of about 7 degrees.

17. A projectile as in any one of the preceding claims wherein the jacket material comprises gilding metal.

18. A projectile in accordance with claim 17 wherein the gilding metal jacket comprises approximately 90% copper and 10% zinc.

19. A projectile according to claim 18 wherein the gilding metal jacket is thicker than that normally used on conventional ball projectiles of similar calibre.

20. A projectile according to any one of the preceding claims in combination with a casing to form a cartridge, the casing being dimensioned to fit into a standard firearm wherein the overall length of the projectile is greater than that of a conventional ball projectile of similar caliber and wherein the projectile, when fitted into its casing, provides a cartridge with a length suited to fit into a standard firearm having a casing of the same diameter.

21. A projectile and casing combination in the form of a cartridge as in claim 20 wherein said cartridge is free of toxic components.

22. A projectile and casing combination in the form of a cartridge as in claim 20 wherein said cartridge is lead-free.

23. A jacketed projectile as in any one of the preceding claims wherein the central core is a solid, one-piece core.